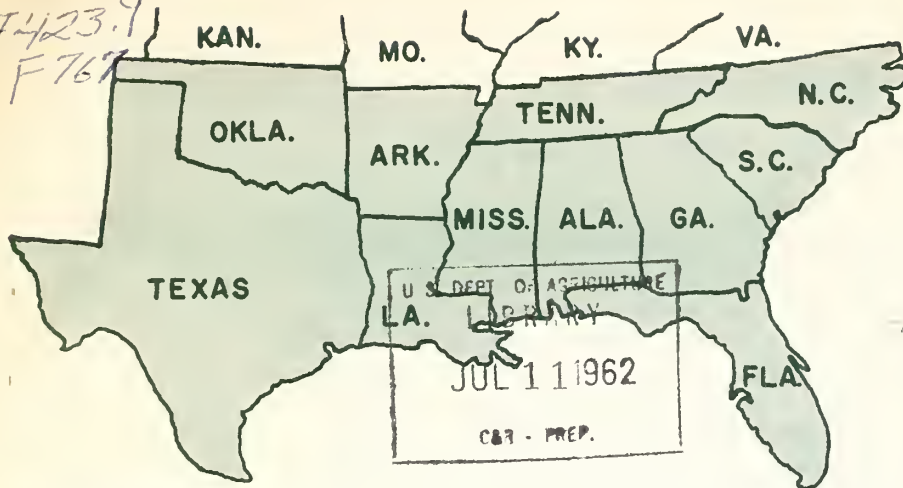


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SOUTHERN FOREST PEST REPORTER

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FOREWORD

This is an introductory issue of the Forest Pest Reporter that will be prepared and distributed by the Regional Office of the U. S. Forest Service in Atlanta. It is a continuation of the same type of publication as formerly distributed by the Southern Forest Experiment Station. It is planned to issue the Pest Reporter about February 15, June 15, and October 15 each year. Those who wish to be added to the mailing list or to receive additional copies should inform the Regional Office.

FOREST INSECT AND DISEASE CONDITIONS FOR 1961 IN REGION 8

Conditions in Brief

Bark beetles and defoliators continued to be the principal insects affecting forest stands in the southern states. The southern pine beetle ravaged pine stands in the Big Thicket area of southeastern Texas and has reached epidemic levels in portions of Alabama, Mississippi, South Carolina and Georgia. The black turpentine beetle population has shown some increase on lowlands on the National Forests and private stands where logging was done by heavy equipment under wet conditions. The elm spanworm continued to cause severe defoliation of hardwoods in western North Carolina, east Tennessee and north Georgia. A slight decrease in acreage occurred in 1961 over 1960, but a greater percentage of the affected area fell into the severe defoliation class. Isolated infestations of the Balsam woolly aphid were found in North Carolina on Fraser fir used as shade trees to the north and east of the original Mt. Mitchell infestation. The forest tent caterpillar severely defoliated $1\frac{1}{2}$ million acres of forest in Alabama and Louisiana with an additional 1 million acres showing light to moderate defoliation.



STATUS OF FOREST INSECTS

SOUTHERN PINE BEETLE, Dendroctonus frontalis Zimm

TEXAS

The southern pine beetle epidemic in southeastern Texas continued in 1961, and no relief is indicated for 1962. As of November 8, 1961, 961 spot infestations had been mapped by aerial observers in Liberty, Harden, Tyler and Polk Counties. The spots ranged from about one-quarter acre to 640 acres in size, the larger consisting of several thousand infested trees. In one stand containing 3 million board feet, 2 million board feet have been killed. Early summer rains hampered control crews, and an estimated 80 thousand infested trees remained uncontrolled by the end of the year. Recent detection flights show the southern pine beetle to be present in epidemic populations on the Big Thicket Ranger District of the Texas National Forest.

MISSISSIPPI

After being endemic for the past three years, the southern pine beetle has again reached epidemic proportions in southeast Mississippi on the Homochitto National Forest. Two spots, one containing 100 infested trees and the other, 25 trees, were located in July. Within four months, 47 spots containing 5 to 250 infested trees had been located and treated by control crews.

ALABAMA

In Alabama, despite prompt control measures, the southern pine beetle has increased in the past year two to tenfold in the Talladega National Forest. On the William B. Bankhead National Forest, an endemic population of southern pine beetle still exists with little increase reported this year.

SOUTH CAROLINA

In South Carolina, the southern pine beetle has continued at epidemic levels on the General Pickens Ranger District on the Sumter National Forest. Approximately 72,500 acres of National Forest land are involved with an additional 20,000 to 25,000 acres on intermingled private land. In a three month period (July 1 - September 30, 1961), a total of 15,500 beetle infested trees were felled and sprayed with chemicals on the General Pickens Ranger District. To date more than 20,000 trees have been treated.

GEORGIA

In Georgia, outbreaks of the southern pine beetle were found on the Tallulah and Chattooga Ranger Districts of the Chattahoochee National Forest (adjacent to the South Carolina infestation). In September, aerial surveys located 107 southern pine beetle spots on the Tallulah District plus an undetermined number of single tree spots. Recent surveys indicated that the infestation has increased and has now spread to the adjacent Chattooga District. Current detection surveys have extended the southern pine beetle infestation to Hall County and other piedmont counties as far south as Upson.

Salvage and chemical control measures have been applied where major outbreaks have occurred in the National Forest and a majority of the larger private holdings.

BLACK TURPENTINE BEETLE, Dendroctonus terebrans (Oliver)

The black turpentine beetle has continued its activity on National Forest and private land following logging and other operations. Populations were generally lower this year than they had been in the past two years, primarily due to a general decrease in logging activity, favorable moisture content and wide-spread control operations.

GULF STATES
GEORGIA &
ALABAMA

In low areas, particularly in the Gulf States, which were logged by heavy equipment under wet conditions, losses due to the turpentine beetle occurred. Populations were extremely high in low areas where pine poles, sawtimber, pulpwood and hardwood were removed in four successive operations. Beetle activity is also on the increase in naval stores areas in southern Alabama and southern Georgia, especially where trees are being tapped for the first time.

IPS (PINE ENGRAVERS), Ips spp.

ARKANSAS

During the spring, a series of tornadoes and windstorms blew down millions of board feet of shortleaf pine timber in western Arkansas. Only rapid salvage and weather conditions unfavorable for brood development prevented what could have been a serious Ips outbreak. Ips did increase as a result of this damage, but not sufficiently to cause alarm.

TEXAS,
ALABAMA &
FLORIDA

Infestations of Ips beetles in other parts of the Region were generally limited to lightning strikes, saltwater, overflow from oil wells, or otherwise weakened trees. Ips avulsus was often found associated with southern pine beetles in southeast Texas and Alabama, making it difficult at times to determine which was the primary invader. There has also been some indication of increase in Ips activity in southern Florida in trees weakened by 1959-1960 hurricanes.

BALSAM WOOLLY APHID, Chermes piceae (Ratz)

NORTH
CAROLINA

The Balsam woolly aphid was detected on Fraser fir on Mt. Mitchell State Park in 1957. Detection surveys made the following year indicated that the infestation was restricted to 7,100 acres of spruce-fir type in the Mt. Mitchell area. During 1961, increased mortality of the Fraser fir on Mt. Mitchell was noted. In addition, isolated infestations were found on shade trees in Avery, Burke and Yancey counties, North Carolina. Aerial surveys conducted in the fall of 1961 indicated that native spruce-fir stands on Roan Mountain, Grandfather Mountain, the Great Smoky Mountains National Park and Richland Mountain are still free from aphid attack.

Tests were made in 1961 with various insecticides for aphid control on Mt. Mitchell State Park in cooperation with the North Carolina State Forest Service and the Southeastern Forest Experiment Station. The results of these tests have not been evaluated.

ELM SPANWORM, Ennomos subsignarius (Hbn.)

GEORGIA,
TENNESSEE &
NORTH
CAROLINA

Defoliation of oaks, hickories and other hardwoods in the tri-state area of Georgia, Tennessee and North Carolina by elm spanworms encompassed a gross area of 1,532,000 acres in 1961. This is a slight decrease over last year's gross acreage of 1,676,000 acres; however, there was a considerable increase in the acreage with moderate and heavy defoliation in 1961. In 1961, the movement of the outbreak continued to be in a northerly and easterly direction.

An egg mass survey conducted in September indicated a population decline over most of Tennessee, north central Georgia and southwestern North Carolina. This year, egg mass counts were highest in Macon and Graham Counties, North Carolina, and Rabun and Habersham Counties, Georgia. A moderate to heavy defoliation can be expected in these counties in 1962.

Control measures were applied on a total of 7,850 acres of high value recreational and research areas on the Chattahoochee National Forest, Joyce Kilmer Memorial Forest and the Coweeta Hydrologic Laboratory in Macon County, North Carolina. Aerial applications were applied with a helicopter at the rate of $\frac{1}{2}$ pound DDT in 1 gallon of fuel oil per acre or fixed-wing aircraft at 1 pound DDT in 1 gallon of fuel oil per acre. Both ratios were equally effective in controlling the elm spanworm.

FOREST TENT CATERPILLAR, Malacosoma disstria (Hbn.)

LOUISIANA

The Forest tent caterpillar again severely defoliated water tupelo, blackgum, sweetgum and other bottomland hardwoods over extensive areas in Louisiana and Alabama during the spring. In Louisiana, three extensive areas totaling about $1\frac{1}{2}$ million acres were completely defoliated. One, east of Alexandria, covered at least 300 thousand acres. About 250 thousand acres were defoliated just west of New Orleans and Lake Pontchartrain, and over 1 million acres were defoliated in the Atchafalaya Basin. Most of the latter two areas had been defoliated in 1960.

ALABAMA

Complete defoliation occurred on an estimated 200 thousand acres of water tupelo-blackgum type along the Alabama River in southern Alabama. This is an increase of 144 thousand acres over last year. An additional 450 thousand acres received scattered defoliation. Severe defoliation is expected to occur in all areas next year unless natural factors, such as parasites and predators, intervene.

SAWFLIES

Pine sawflies, Neodiprion spp. The sawflies were generally endemic this year with only light scattered feeding in most areas.

NORTH
CAROLINA

The Virginia pine sawfly, N. pratti pratti (Dyar) continued to decline in north central North Carolina. Feeding damage was noticeable on shortleaf and Virginia pines in Granville, Vance, Durham, Orange and Franklin Counties.

The Red-headed pine sawfly, Neodiprion lecontei (Fitch), defoliated 2,000 acres of three and four year old loblolly pines in Columbus County, North Carolina. Feeding occurred in localized spots and, in some cases, individual trees were stripped of their foliage.

ARKANSAS

In Arkansas, the Loblolly pine sawfly, N. taedae linearis (Ross), defoliated approximately fifty acres of thinly stocked stands of loblolly pine.

TENNESSEE

An unidentified species of sawfly was reported feeding on a 500 acre pine plantation in west Tennessee, and in scattered plantations in the Gulf States.

PINE TIP MOTHS, Rhyacionia frustrana (Comstock) and R. rigidana

No formal surveys were made of these ever present pests of young pine. Reports indicate, however, that tip moths were present throughout the pine growing areas of Region 8. In most instances, the populations were reported less abundant than in previous years.

PINE CHAFER, Anomala obliqua (Horn.)

NORTH
CAROLINA

An outbreak of pine chafer which occurred on two and three year old loblolly pine plantations in Columbus County, North Carolina, declined in 1961 after three years of heavy damage. The population decline was attributed to abnormal moisture conditions at the time when the grubs were in the soil.

WALKING STICKS

An undetermined species of walking stick defoliated several thousand acres of oak in southwestern Arkansas and southeastern Oklahoma during the fall. Very little damage is expected to result from the late infestation.

TEXAS LEAF-CUTTING ANT, Atta texana (Buckley)

LOUISIANA

The Texas leaf-cutting ant defoliated young pine seedlings in west central Louisiana and other areas within its range.

MISCELLANEOUS DEFOLIATORS

GULF STATES,
NORTH
CAROLINA

The yellow-necked caterpillar, Datana ministra (Drury), the variable oak leaf caterpillar, Heterocampa mantee (Dblady.), the spiny oakworm, Anisota stigma (Fab.) and the orange striped oakworm,

Anisota senatoria (J. E. Smith) were observed defoliating oaks in widely scattered areas throughout the hardwood areas of the Gulf States. Epidemic populations of the fall cankerworm, Alsophila pometaria (Harr.), on two small tracts near Hot Springs, North Carolina, declined as a result of late spring frost. Colonies of the fall webworm, Hyphantria cunea (Drury), were commonly seen feeding on sourwood, persimmon and other hardwoods during the late summer throughout the piedmont and mountain section of North Carolina. In some localities, individual trees were stripped of their foliage, but nowhere were extensive areas completely defoliated.

STATUS OF FOREST DISEASES

Oak Wilt

NORTH
CAROLINA,
TENNESSEE,
ARKANSAS &
OKLAHOMA

Until 1961 the known range of oak wilt in Region 8 included 15 counties in northern Arkansas; 5 counties in western North Carolina; 1 county in eastern Oklahoma and 18 counties in eastern Tennessee. In Arkansas and North Carolina, where active control programs are being carried out, the disease has not spread to new counties but new infections have been found within the general infection area. In these states the number of new infections has remained rather constant. Oak wilt in Oklahoma and Tennessee has not been surveyed in the last two years and the exact extent of infection will not be known until adequate surveys are conducted.

Reports in 1961 indicated that oak wilt had been found and identified in the city of Dallas, Texas. This represents a new infection about 250 miles removed from any previous verified infection center.

Oak Decline

GEORGIA,
NORTH
CAROLINA,
SOUTH
CAROLINA, &
TENNESSEE

Oak decline in the southern region is confined to the mountainous areas of Georgia, North Carolina, South Carolina and Tennessee and to a lesser extent to the piedmont area in the region. The condition reached its climax in the 1955-58 period, apparently as a result of severe drought conditions. As moisture conditions returned to normal or near normal the incidence of oak decline has shown a marked reduction. Some trees in the affected area are continuing to show symptoms but the number is expected to decrease until such time as there is another reduction in available moisture.

Fomes annosus

Surveys and systematic observations of pine plantations in the Region has shown Fomes annosus root rot to be widely distributed. Fomes annosus has been found to be present throughout most of the pine producing areas in the Region. It should be emphasized that intensity of infection varies from area to area and from pine species to pine species. Prior to 1961 it was believed that most

damage was confined to white and slash pine. Examinations in 1961 showed loblolly pine to be seriously infected in some areas.

As initial infections are associated with thinnings, it is believed that annosus root rot will become increasingly more important as additional plantations reach thinning age.

Needle Cast

GEORGIA &
FLORIDA

Periodically, weather conditions in Region 8 are such that needles of certain pines are predisposed to infection by needle cast fungi. Affected trees have a scorched appearance because the infected needles turn brown from the tip toward the base and are often shed prematurely. Needle cast is usually not economically important because attacked trees usually recover and the effects on growth appear to be slight. This winter severe local attacks of needle cast on slash pine are occurring in south Georgia and north Florida.

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